SUBCHAPTER 6. REMEDIAL ACTION

7:26E-6.1 Remedial action requirements

(a) The person responsible for conducting the remedial action shall notify the Department and the local governing body pursuant to N.J.A.C. 7:26E-1.4.

(b) Each remedial action implemented at a contaminated site shall:

1. Be approved by the Department prior to implementation, if a remedial action selection report is also required pursuant to N.J.A.C. 7:26E-5.2(a);

2. Comply with all applicable remediation standards in effect at the time the remedial action workplan is approved by the Department, provided, however, that if the applicable numeric remediation standards decrease by an order of magnitude or more prior to the issuance of a No Further Action Letter for the area of concern or the site, the person responsible for conducting the remediation shall be responsible for any additional necessary remediation to achieve the new remediation standards;

3. Comply with all applicable Federal, State, and local laws, regulations, and requirements; and

4. Not in itself cause an uncontrolled or unpermitted discharge or transfer of contaminants from one media to another.

(c) Single phase remediations, where the remedial action is conducted concurrently with sampling to delineate the contamination and to confirm contaminant removal, are acceptable.

(d) Free and/or residual product determined to be present pursuant to N.J.A.C. 7:26E-2.1(a)11 shall be treated or removed when practicable, or contained when treatment or removal are not practicable. Likewise, natural ground water remediation for dissolved phase contamination may be implemented if it is determined by the Department that active ground water remediation for the dissolved phase is impracticable or not cost-effective. Decisions regarding the practicability of a remedial decision shall be made by the Department on a case by case basis. Natural remediation of free and/or residual product will not be allowed.

(e) Institutional controls shall be required whenever a restricted use remedy or a limited restricted use remedy is used to remediate a site.

(f) The person responsible for conducting the remediation of historic fill material shall do so pursuant to N.J.A.C. 7:26E-6.2(c). Remedies for any other fill material, not meeting the definition of historic fill material, shall be selected pursuant to N.J.A.C. 7:26E-5.1.

7:26E-6.2 Remedial action workplan

(a) If a remedial action workplan is required by the Department in an oversight document or pursuant to the ISRA or UST programs, or if the person responsible for conducting the remediation elects to obtain Department pre-approval for the workplan, the workplan shall be submitted in accordance with the schedule contained in that document, if applicable, and shall be presented in a format that corresponds directly to the outline of this section. The workplan shall include:

1. The remedial investigation report, pursuant to N.J.A.C. 7:26E-4.8, shall be presented as the first section of the remedial action workplan. If the remedial investigation report was previously submitted to the Department, either a summary of the report or a copy of the findings/recommendation section of the report may be submitted;

2. A sampling summary table for post remediation samples pursuant to N.J.A.C. 7:26E-4.2 (remedial investigation workplan).

3. A proposal to complete all requirements in N.J.A.C. 7:26E-6;

4. The identification of all applicable remediation standards;

5. A detailed description of the remedial action and the remedial technology to be conducted for each area of concern;

6. The identification of all areas where remedial action will be conducted on a scaled site map pursuant to N.J.A.C. 7:26E-4.8 (remedial investigation report). In addition, the map shall specify:

i. The location of remedial treatment units;

ii. The volume of each environmental medium to be remediated;

iii. The vertical and horizontal extent of area to be remediated;

iv. The location, depth and concentration of all contaminants in excess of the remediation standard; and

v. Sample locations, depths and parameters for all post-construction samples;

7. A quality assurance project plan including proposed sampling and analytical methods pursuant to N.J.A.C. 7:26E-2.2;

8. A list of all required permits;

9. If any construction activity is planned, the following items shall be provided in the workplan:

i. The location of any such construction facilities with additional details describing construction design;

ii. All applicable requirements and standards relating to construction for onsite remedial units including inspection and professional engineer certification.

10. A description of soil and sediment erosion control and monitoring, and dust and odor control and monitoring procedures to be implemented during remedial activities, if applicable;

11. A health and safety plan pursuant to N.J.A.C. 7:26E-1.9;

12. A detailed description of site restoration plans to comply with N.J.A.C. 7:26E-6.4 (post-remediation action requirements);

13. A description of procedures for dismantling and removal of remedial structures and equipment from the site, if applicable;

14. A cost estimate of the remedial action;

15. The proposed completion date of the remedial action and a schedule of the remedial action as required pursuant to N.J.A.C. 7:26E-6.5;

16. The following documentation whenever a deed notice is required as a component of the remedial action:

i. A copy of the property owner's written agreement to record the deed notice, pursuant to N.J.A.C. 7:26E-8.2(b); and

ii. A draft deed notice, including all of the exhibits, pursuant to N.J.A.C. 7:26E-8.2(c);

17. All documentation required pursuant to N.J.A.C. 7:26E-8.3 whenever a classification exception area is to be established; and

18. A plan for the maintenance and evaluation of all engineering and institutional controls pursuant to N.J.A.C. 7:26E-8.5, 8.6, and 8.7, as applicable.

(b) If contaminated soil will be reused at a site, an evaluation pursuant to N.J.A.C. 7:26E-6.4(d) shall be conducted and a soil reuse proposal shall be submitted to the Department as part of the remedial action workplan. The soil reuse proposal may also

be submitted at any time during the remediation process, as appropriate. At a minimum, the soil reuse proposal shall include:

1. A description of the originating site or area of concern by the submission of a remedial investigation report or, as applicable, a remedial action report for the contaminated soil. If the reports were previously submitted to the Department, a summary of the report may be submitted;

2. A determination in accordance with N.J.A.C. 7:26-8.5 as to the waste classification of the soil, including any supporting data requested by the Department; and

3. A detailed description of the proposed reuse and conditions at the site of reuse including:

i. The location of the site including state, county, municipality, block and lot numbers;

ii. The volume of soil to be reused;

iii. Identification of the specific location on the site where the reuse will be conducted on a scaled maps pursuant to N.J.A.C. 7:26E-3.2(a)3i through iii;

iv. The depth to ground water on the receiving site, including the method of determination;

v. The receiving site use;

vi. A discussion of the performance, effectiveness and reliability of the proposed reuse and any potential negative impacts to human health, safety or the environmental as a result of the reuse; and

vii. All other applicable data and information required pursuant to (a)8 through 15.

(c) If historic fill material will not be treated or removed from the site, engineering and institutional controls shall be proposed in accordance with the Department's procedures in effect at the time of proposal, provided that the information is pursuant to N.J.A.C. 7:26E-4.8(c)14 and the following documentation is presented in the remedial action workplan:

1. A statement that all other areas of concern located in the historic fill material area have been addressed as separate areas of concern. Remedies for any such areas, not meeting the definition of historic fill material, shall be selected pursuant to N.J.A.C. 7:26E-5.1.

7:26E-6.3 Specific remedial action requirements

(a) As a first priority during remedial action, contaminants in all media shall be contained and/or stabilized to prevent contaminant exposure to receptors and to prevent further movement of contaminants through any pathway.

(b) The following requirements shall be followed for the closure of an underground storage tank:

1. The associated piping shall be drained and the tanks pumped out and cleaned thoroughly using the American Petroleum Institute's recommended Practice for the Abandonment or Removal of Used Underground Service Tanks, as amended and supplemented. Copies can be obtained from the American Petroleum Institute, 1220 L Street Northwest, Washington, DC 20005;

2. All of the openings in the tank shall be plugged except for one vent hole;

3. The soil around the tank shall be excavated and the tank shall be removed and secured;

4. After the tank is secured, it shall be examined for holes and the Department hotline at 1-877 WARNDEP or (877) 927-6337 shall be called if any holes are discovered and/or a discharge has been confirmed pursuant to N.J.A.C. 7:14B-7.3, unless a discharge from the tank was previously reported to the Department;

5. The tank shall then be prepared for disposal by labeling the tank regarding its site of origin, ultimate destination site and the substance(s) that were stored in it during its use as a storage tank; and

6. The tank shall be removed from the site according to all applicable laws and regulations.

i. During tank removal, the following observations shall be made and documented:

(1) A description of tank condition (with photographic documentation);

(2) The excavation floor and sidewalls shall be examined for any physical evidence of soil contamination;

(A) When tanks that contained volatile organics, including No. 2 fuel oil, diesel fuel, gasoline, kerosene, jet fuel, waste oil, are removed, the excavation floor and sidewalls shall be field screened with a properly

calibrated flame ionization detector (FID), or photoionization detector (PID) along transects spaced no more than five feet apart.

(B) If the tank did not contain volatile organics (for example, No. 4, No. 6 fuel oil), the excavation shall be examined visually for evidence of a discharge.

(3) If there is no evidence of a discharge, soil samples for laboratory analysis shall be taken immediately after tank removal as follows:

(A) If there is no ground water in the excavation, center line soil samples are required at a frequency equal to the total length of the tank divided by five (minimum of one sample), provided that samples are spaced equidistantly and that the outermost samples obtained are no greater than 2.5 feet from each respective end of the tank. If the total length of a tank is not evenly divisible by five, one additional sample shall be obtained for any fraction remaining;

(B) If there is ground water in the excavation, soil samples shall be taken as follows:

(I) If potential contaminants have a specific gravity of one or less, independent of the number of tanks in the excavation, one sample shall be taken from the zero to six inch interval above the water table from each excavation sidewall for every 30 linear feet of sidewall (minimum of one sample per sidewall); except that, for no. 2 fuel oil or diesel oil tanks of 550 gallon capacity or less, one sample, biased to the suspected location of greatest contamination, shall be taken from one excavation sidewall at the zero to six inch interval above the water table;

(II) If potential contaminants have a specific gravity of more than one, samples shall be taken pursuant to (b)6i(3)(A) above; or

(III) If the tanks contained mixed substances such that some contaminants had a specific gravity of more than one and some contaminants had a specific gravity of less than one (for example no. 6 fuel, or waste oil potentially contaminated with chlorinated solvents), samples shall be taken below the water table pursuant to (b)6i(3)(A) above, and, independent of the number of tanks in the excavation, from the zero to six inch interval above the water table from each excavation sidewall for every 30 linear feet of sidewall (minimum of one sample per sidewall); and

(IV) Soil samples taken from below the water surface shall be taken using appropriate sediment sampling methods; and

(4) If there is evidence of a discharge and a soil remedial action will occur, refer to N.J.A.C. 7:26E-6.4. If there is evidence of a discharge, but there is insufficient soil to conduct a soil remedial action, (for example, tank is located in bedrock) or any portion of the tank is located within or immediately above the ground water table, a ground water sample shall be taken pursuant to N.J.A.C. 7:26E-3.7(c);

(5) If there is any evidence of ground water contamination, including without limitation, a sheen or odor, a ground water sample shall be collected pursuant to N.J.A.C. 7:26E-3.7; and

(6) A description of product type and quantity spilled from tank or tank system during excavation.

ii. The following requirements shall be followed for the abandonment in-place of a physically accessible underground storage tank. If contamination is detected above an applicable remediation standard and remedial action will occur, the tank system shall be removed to facilitate remedial action, if feasible. If it is not feasible to remove the tank system, a certification shall be submitted, signed and sealed by a licensed New Jersey professional engineer, stating why the removal is not feasible:

(1) The tank system and associated piping shall be drained and the system pumped out and cleaned thoroughly using American Petroleum Institute guidance applicable at the time of cleaning. Because vapors in the tank atmosphere will be displaced during the tank cleaning and abandonment operation, particular emphasis shall be placed on health and safety concerns;

(2) After the tank is cleaned, the tank shall be inspected and any areas of questionable integrity, including, without limitation, any cracks or corrosion, or evidence of discharge, shall be documented. Photographs may be submitted to document that the integrity of the system has been breached, if the evidence is clearly visible in the photograph;

(3) Upon completion of tank cleaning, soil sampling shall be conducted by completing borings through the bottom of the tank, along the center line, at a frequency equal to the total length of the tank divided by five (minimum of one sample), provided that the samples are spaced equidistantly and that the outermost samples obtained are no greater than 2.5 feet from each respective end of the tank. If the total length of a tank is not evenly divisible by five, one additional sample shall be obtained from any fraction remaining;

(4) Additional soil samples for volatile organics analysis shall be collected in accordance with the requirements at N.J.A.C. 7:26E-3.6(a)4;

(5) If ground water has been determined to be in contact with the tank invert and there is no evidence of a discharge, sampling shall be conducted in accordance with N.J.A.C. 7:26E-3.9(a)3i(5);

(6) Decommissioning of the tank system, including all fill pipes, shall be completed by completely filling the tank system with sand, cement or other inert material with similar physical/chemical properties;

(7) All fill pipes shall be removed to a depth of a minimum of one foot below ground surface; and

(8) Procedures shall comply with all local ordinances;

iii. If the underground storage tank is located under a permanent structure or is physically inaccessible or a certification is submitted, signed and sealed by a licensed New Jersey professional engineer, stating that the sampling requirements at (b)6ii(3), (4), and (5) above for closure of the underground storage tank will cause damage to an adjacent structure, an alternate method for documenting the integrity of the tank may be submitted pursuant to N.J.A.C. 7:26E-1.6(d);

iv. No sampling is required for the closure (removal or abandonment) of an underground storage tank system which has always had secondary containment and leak detection pursuant to N.J.A.C. 7:14B, provided that there is no evidence of a discharge during tank closure and no history of any leaks or repairs; and

v. All piping systems associated with the underground tank shall be remediated in accordance with N.J.A.C. 7:26E-3.9(a)5.

(c) Requirements for active ground water remediation [Reserved]

(d) When submitting a remedial action workplan for natural ground water remediation, the person responsible for conducting the remediation shall demonstrate to the Department that:

1. Groundwater contaminant concentrations will decrease to applicable remediation standards pursuant to N.J.A.C. 7:26E-1.13 through degradation, retardation, or dispersion under present site conditions.

i. The person responsible for conducting the remediation shall evaluate the following site conditions to determine the viability of natural remediation:

(1) Contaminant mass, as determined by free or residual product and dissolved phase delineation and dissolved contaminant concentrations;

(2) Dissolved oxygen content of ground water;

(3) Presence or absence of microorganisms in soil and ground water;

(4) Ground water flow velocity; and

(5) Applicable physical and chemical characteristics of contaminants and contaminant degradation products present in both soil and ground water;

ii. The person responsible for conducting the remediation may evaluate the following site conditions to determine the viability of natural remediation, if applicable:

(1) Sorptive and desorptive characteristics of the soil; and

(2) Other applicable physical and chemical characteristics of soil;

2. Free and/or residual product in the unsaturated and saturated zones, as determined pursuant to N.J.A.C. 7:26E-2.1(a)11, is treated or removed, if practicable, or contained if treatment or removal are not practicable;

3. All soil contamination in the unsaturated zone has been or will be remediated to the applicable numeric soil remediation standard in accordance with a schedule approved by the Department;

4. Ground water contamination has been delineated to the remediation standard applicable to the nearest downgradient receptor;

5. Ground water contaminated above the applicable standard will not reach the nearest downgradient receptor, as estimated by an appropriate ground water flow/contaminant transport model selected pursuant to N.J.A.C. 7:26E-4.4(h)3iv;

6. The fate of the contaminant plume has been documented pursuant to N.J.A.C. 7:26E-8.3(b)2;

7. Contaminant levels in ground water do not present a vapor risk to any receptors. This determination shall be made on a case-by-case basis;

8. Predicted impacts to potential receptors are consistent with the current and potential ground water uses based on a 25-year planning horizon as projected by local and county land use documents. This shall include, without limitation,

information pertaining to the existence of water lines, proposed future installation of water lines, local and/or county ordinances restricting installation of potable wells;

9. All necessary access agreements needed to monitor the ground water quality pursuant to (e) below have been obtained; and

10. If a classification exception area needs to be established, the person responsible for conducting the remediation has provided the Department all necessary information in accordance with N.J.A.C. 7:26E-8.

(e) Monitoring and performance requirements for natural remediation are as follows:

1. A ground water monitoring program shall be implemented to monitor plume characteristics and movement, to calibrate the model used to estimate the eventual extent of the plume, and to assess the effectiveness of the natural ground water remediation. This program shall consist of the following:

i. Sampling shall be conducted on a quarterly basis at monitoring wells associated with the natural remediation, for a minimum of eight quarters, including:

(1) At least one area of concern monitoring well located at the source area to monitor plume conditions at the source area;

(2) At least one plume sampling point located downgradient of the source area but within the contaminant plume except as provided in (e)1i(3) below;

(3) At least one plume fringe monitoring well located at the limit of the plume, as determined pursuant to (d)4 above. Depending on the areal extent of the contaminant plume, the Department may determine that one monitoring well may satisfy the requirements of both (e)1i(2) above and this subparagraph; and

(4) At least one downgradient sentinel well located beyond the zone delineated pursuant to (d)4 above. Contaminant levels in this sentinel well shall remain below the applicable standard. The sentinel well shall be located no closer than three years travel time to the nearest potential downgradient receptor and no further than five years travel time from the delineated downgradient extent of the contaminant plume;

2. A classification exception area shall be established for the area of the aquifer impacted by the migrating contaminant plume, pursuant to N.J.A.C. 7:26E-8;

3. Data collected pursuant to (e)1 above shall be evaluated and the person responsible for conducting the remediation shall document the effectiveness of that natural ground water remediation as follows:

i. No further remediation is required for ground water if:

(1) Contaminant levels in the sentinel well do not exceed the applicable standards at any time during the monitoring program. A proposal regarding the duration of the monitoring program at the sentinel well may be made by the person responsible for conducting the remediation, based upon site specific data;

(2) The contaminant levels at the source area monitoring well(s) are at or below the applicable standards for two consecutive seasonal high water table monitoring events; and

(3) The contaminant concentrations at all plume monitoring wells are at or below the applicable standards for two consecutive quarterly monitoring events;

ii. Additional remediation will be required if:

(1) Contaminant levels in the sentinel well exceed the applicable standards;

(2) The contaminant levels detected in any of the plume or plume fringe monitoring wells installed pursuant to (e)1i(2) and/or (3) above are not reflective of the contaminant levels predicted by the ground water flow/contaminant transport model; or

(3) Contaminant levels are not decreasing in any area of concern monitoring well, as demonstrated by applying the statistical Mann-Whitney U-Test to eight consecutive quarters of ground water sampling data. The test shall be applied to individual contaminants detected in each area of concern monitoring well, pursuant to Appendix C, incorporated herein by reference; and

iii. Proposals to sample the monitoring wells at a decreased frequency for the purpose of monitoring the Classification Exception Area shall be considered by the Department if:

(1) Contaminant levels in the sentinel well do not exceed the applicable standards at any time during the monitoring program. A proposal regarding the duration of the monitoring program at the sentinel well shall be made by

the person responsible for conducting the remediation, based upon site-specific data;

(2) The contaminant levels detected in the plume or plume fringe monitoring wells above are reflective of the contaminant levels predicted by the ground water flow/contaminant transport model; and

(3) Contaminant levels above the applicable remediation standard remain, but a decreasing trend of contaminant levels is demonstrated in, at a minimum, the area of concern monitoring well(s). The decreasing trend shall be demonstrated by applying the statistical Mann-Whitney U-Test to eight consecutive quarters of ground water sampling data. The test shall be applied to individual contaminants detected in each monitoring well pursuant to Appendix C; and

4. Ground water sample data shall not be averaged for the purpose of the Mann-Whitney U-Test.

5. Alternative non-parametric statistical tests may be proposed. The Department shall determine the acceptability of such tests on a case by case basis.

7:26E-6.4 Post remedial action requirements

(a) The following sampling shall document the effectiveness of the remedial action:

1. All sampling shall be conducted pursuant to N.J.A.C. 7:26E-3.3 through 3.12 and 4.1 through 4.7.

2. For soils, if excavation is conducted, the minimum post remediation sampling frequency shall be:

i. For excavations less than 20 feet in perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.

ii. For excavations 20 to 300 feet in perimeter:

(1) For surface spills, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

(2) For subsurface spills, one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

iii. For larger excavations, sampling frequency may be reduced if documentation acceptable to the Department is provided in the remedial action progress report (N.J.A.C. 7:26E-6.6) or the remedial action report (N.J.A.C. 7:26E-6.7) if the remedial action is completed in less than three months. Documentation shall specify why the reduced sample frequency was considered adequate.

iv. For volatile organics bottom samples taken within 24 hours of excavation, samples shall be taken from the zero to six inch interval at the excavation floor. Samples taken after 24 hours shall be taken at six to 12 inches. For excavations open longer than two weeks, volatile organics sample depth for bottom samples shall be in accordance with N.J.A.C. 7:26E-3.6(a)4 (site investigation requirements).

v. Each excavation within a larger excavation shall be considered a separate excavation and shall comply with (a)2i through iv above.

vi. For tanks, if contaminated soil is removed, post remediation soil samples for laboratory analysis shall be taken immediately after contaminated soil removal pursuant to N.J.A.C. 7:26E-6.3(b)6i(3). If the excavation is enlarged horizontally beyond the immediate tank removal area, additional soil samples shall be taken pursuant to (a)2i through iv above.

3. For soils, if in situ remediation is conducted, the minimum post-remediation sampling frequency shall be one sample per 900 square feet of contaminated area. Where the contaminated zone exceeds two feet in depth, one additional sample per 900 square feet of contaminated area shall be taken or each two feet of depth.

4. Post-remediation sample locations and depth shall be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples shall be biased toward locations and depths of the highest expected contamination.

5. If the extent of contamination above the applicable residential soil remediation standard was estimated during the remedial investigation, the extent of contamination above the applicable residential soil remediation standard shall be confirmed using laboratory analysis prior to the completion of a remedial action or the execution of a deed notice.

6. If the Department established a groundwater classification exception area as part of the remedial action, sampling shall be conducted pursuant to N.J.A.C. 7:26E-8.6(a)7i.

(b) All areas subject to remediation shall be restored, to the extent practicable, to pre-remediation conditions with respect to topography, hydrology and vegetation, unless alternate restoration is approved by the Department pursuant to N.J.A.C. 7:26E-1.6(d).

1. Sites located adjacent to or in wetlands or in or near other environmentally sensitive natural resources, may have further requirements under N.J.A.C. 7:7E (Coastal Zone Management) or N.J.A.C. 7:7A (Wetlands Act).

2. Fill material used to restore a site after the remediation has been completed shall be similar in physical properties to the material removed unless otherwise approved in advance by the Department. Fill used for new building foundations or other construction in remediated areas are exempt from this requirement.

i. If the excavated material is native soil, the fill shall be of equal or less permeability than the soil removed.

ii. If the excavated material is not native soil, the fill material shall be of equal or less permeability than the native soil in or adjacent to the area of concern or, at a minimum, have a permeability equal to or less than that of loam.

iii. Fill shall be uncontaminated pursuant to any applicable remediation standard and free of extraneous debris or solid waste.

iv. Documentation of the quality of the fill shall be provided by a certification stating that it is virgin material from a commercial or noncommercial source or decontaminated recycled soil.

v. Uncontaminated soil from the site pursuant to any applicable remediation standard may be returned to excavations or may be used elsewhere on the site.

vi. The bills of lading shall be provided to the Department to document the source(s) of fill. The documentation shall include:

(1) The name of the affiant and relationship to the source of the fill;

(2) The location where the fill was obtained, including the street, town, lot and block, county, and state, and a brief history of the site which is the source of the fill; and

3. A statement that to the best of the affiant's knowledge and belief the fill being provided is not contaminated pursuant to any applicable remediation standards and a description of the steps taken to confirm such.

(c) After completion of remediation all monitoring and extraction wells shall be decommissioned in accordance with N.J.A.C. 7:9D unless otherwise approved by the Department.

(d) If contaminated soils will be reused at a site, a soil reuse evaluation proposal shall be conducted and submitted to the Department prior to the reuse of contaminated soils and shall satisfy the following sampling requirements:

1. The contaminated soil intended for reuse shall be fully characterized and delineated pursuant to the site investigation, N.J.A.C. 7:26E-3, and remedial investigation, N.J.A.C. 7:26E-4, or, if the soil has not been fully characterized and delineated, the soil shall be sampled in accordance with all applicable requirements at N.J.A.C. 7:26E-1, 2, 3.4, and 3.6, at the following frequencies:

i. Field screening methods, if available pursuant to N.J.A.C. 7:26E-2.1(b), shall be used to determine sample locations. Each 20 cubic yards of soil shall be screened with borings or test pits throughout the depth of the soil pile, at two foot intervals. Two samples shall be collected for laboratory analysis for the first 100 cubic yards of excavated material and one sample for each additional 100 cubic yards; or

ii. If contamination is not detectable by field screening methods, samples shall be collected for laboratory analysis from mid-depth in the pile at a frequency of one sample per 20 cubic yards for the first 100 cubic yards of soil and one sample for each additional 100 cubic yards; and

iii. For quantities of soil greater than 1,000 cubic yards, a lower sampling frequency may be acceptable, subject to prior Departmental approval pursuant to N.J.A.C. 7:26E-1.6(d);

2. When soils are excavated to access underground storage tank systems or other subsurface structures and there is no evidence of a discharge pursuant to N.J.A.C. 7:26E-6.3(b), soil analysis of the excavated soil is not required prior to reuse. The results of post-remedial sampling required pursuant to N.J.A.C. 7:26E-6.3 shall be evaluated prior to reuse of the soils to confirm that no discharge occurred at the underground storage tank system; and

3. Excavated soil from drill cuttings or test pit excavations, may be returned to the original location provided that:

i. The activity was performed in accordance with the Subsurface and Percolating Waters Act, N.J.S.A. 58:4A-4.1;

ii. Neither free nor residual product is present, as determined pursuant to N.J.A.C. 7:26E-2.1(a)11;

iii. The contamination present shall be addressed as part of the remediation of the area of concern; and

iv. The replacement of the soil shall not pose any additional threat to public health, safety or the environment.

(e) If the person responsible for conducting the remediation required for real property not owned by that person does not obtain the property owner's written consent to implement the institutional and/or engineering control at the property and to record a deed notice, the person shall remediate the property to an applicable unrestricted soil remediation standard.

7:26E-6.5 Remedial action schedule and progress reports

(a) The person responsible for conducting the remediation shall prepare a schedule of the remedial action pursuant to this section if the remedial action requires more than three months to complete.

(b) The person responsible for conducting the remediation shall include the following in the remedial action schedule:

1. Monthly time frames, for the initiation and completion of each remedial action task, including a consideration of Department review time for submitted reports. Specific dates shall not be listed, as these will be contingent upon Department approval of the remedial action workplan;

2. Time frames for contractor bidding/review/acceptance process;

3. A critical path schedule for all Federal, State, and local permit applications and final permit approvals;

4. A listing of all anticipated report submittals to the Department including, without limitation, progress reports, groundwater monitoring reports, post-remedial action data reports for individual areas of concern, construction design reports and final remedial action reports;

5. Time frames for submission of remedial action progress reports pursuant to N.J.A.C. 7:26E-6.6 and the remedial action report pursuant to N.J.A.C. 7:26E-6.7, including consideration of:

i. Review times of not only the person preparing each report, but all other persons who will be reviewing the report prior to submission to the Department, including, but not limited to, owners, operators, subcontractors, and legal advisors; and

ii. Laboratory analysis and data reduction time;

6. A timeframe for submitting a request for a waste classification to the Department for disposal or treatment of waste generated during implementation of the remedial action; and

7. A timeframe for site restoration pursuant to N.J.A.C. 7:26E-6.4(b), and the Department's final inspection.

(c) Within thirty (30) calendar days after the Department approves the remedial action workplan, the person responsible for conducting the remediation shall revise the remedial action schedule to identify the projected month/year for each task, and submit the revised schedule to the Department.

7:26E-6.6 Remedial action progress reports

(a) The person responsible for conducting the remediation shall submit remedial action progress reports to the Department pursuant to this section and according to the remedial action schedule pursuant to N.J.A.C. 7:26E-6.5.

(b) The person responsible for conducting the remediation shall include the following in each remedial action progress report, as appropriate:

1. A description of each remedial action:

i. Scheduled to be initiated or completed during the reporting period;

ii. Actually initiated or completed during the reporting period; and

iii. Scheduled but not initiated or not completed during the reporting period, including the reasons for the noncompliance with the Department approved schedule;

2. Discussion of problems and delays in the implementation of the remedial action workplan, including proposals for corrections;

3. Any proposal for a deviation from, or modification to, the approved remedial action workplan. The Department must approve proposed modifications in writing prior to implementation;

4. A revised schedule pursuant to N.J.A.C. 7:26E-6.5, to reflect the changes described pursuant to (b)1 through 3, above;

5. The status of all permit applications relative to the critical path schedule for permits in the remedial action schedule pursuant to N.J.A.C. 7:26E-6.5(b)3;

6. A list of each remedial action to be performed during the next reporting period;

7. The cost of each remedial action, including:

i. An annual summary of all remedial action costs incurred to date; and

ii. A revised cost estimate for remedial actions remaining to be performed;

8. A tabulation pursuant to N.J.A.C. 7:26E-3.13(c)3, of all sampling results received during the reporting period and a summary of the data and any conclusions in a format consistent with N.J.A.C. 7:26E-4.8;

9. For active groundwater remedial actions:

i. Groundwater elevation contour maps representative of groundwater flow conditions immediately preceding initiation of the active groundwater remedial action and during the active groundwater remedial action;

ii. Graphs depicting changes in contaminant concentrations over time for all contaminated monitoring wells and all downgradient delineation monitoring wells;

iii. A summary, in narrative and table format, of the volume of groundwater treated since the last reporting period, and the total volume of groundwater treated since the active remedial action commenced;

iv. A summary regarding groundwater contamination stating that either:

(1) Contamination remains at concentrations above the applicable remediation standards, and a proposal detailing what additional remedial actions will be taken to address this contamination; or

(2) All contamination concentrations are at or below the applicable remediation standards;

10. For natural remediation groundwater remedial actions:

i. A summary table of the groundwater monitoring results collected; and

ii. If applicable, conclusions whether data indicate that natural remediation is no longer appropriate, and submit a revised remedial action workplan, pursuant to N.J.A.C. 7:26E-6.2;

11. A description of all wastes generated as a result of the remedial action, including:

i. Tabulation of waste classification and/or characterization samples collected, including the physical state of the material (solid, liquid, sludge), the volume of material, number of samples collected, analyses performed and results;

ii. A listing of all types and quantities of waste generated by the remedial action during the reporting period and to date;

iii. The name of the disposal facility used;

iv. The transporters' dates of disposal; and

v. If appropriate, the manifest numbers of each waste shipment; and

12. Any additional support documentation that is available (for example, photographs).

7:26E-6.7 Remedial action report

(a) The person responsible for conducting the remediation shall prepare a remedial action report in a format that corresponds directly to the outline of this section when the remedial action is completed, except as noted in (e), below.

(b) The person responsible for conducting the remediation shall include the following in the remedial action report:

1. All information contained in the remedial investigation report pursuant to N.J.A.C. 7:26E-4.8; or if previously submitted to the Department, a summary of the following information from that report:

i. General history of the site;

ii. A description of the physical setting of the site; and

iii. A summary, by area of concern, of the concentration of contaminants with a comparison to the applicable remediation standards;

2. A summary, by area of concern, of all remedial actions completed;

3. A list of the remediation standards achieved for each remedial action;

4. “As-built” diagrams for any permanent structures including, without limitation, caps or other remediation structures and engineering controls;

5. A detailed description of site restoration activities, if applicable, pursuant to N.J.A.C. 7:26E-6.4(b);

6. A report of the remedial action costs, including a cost estimate to monitor, maintain, and certify the protectiveness of each engineering and/or institutional control pursuant to N.J.A.C. 7:26E-8; and

7. Information pursuant to (c) through (e), below, as applicable.

(c) The person responsible for conducting the remediation shall include the following in the soil remedial action section and sediment remedial action section of the report:

1. Tables and figures pursuant to N.J.A.C. 7:26E-4.8 containing all pre- and post-remedial data keyed appropriately so that:

i. Completion of the remedial action is documented; and

ii. The volume of contaminated soil or sediment which was remediated is clearly indicated;

2. Fully executed manifests documenting any offsite transport of waste material; and

3. A copy of the final draft deed notice, including all of the exhibits, pursuant to N.J.A.C. 7:26E-8.2, if applicable;

(d) The person responsible for conducting the remediation shall include graphs depicting changes in contaminant concentrations over time for all monitoring wells in the active groundwater remedial action section of the report.

(e) The person responsible for conducting the remediation shall, upon satisfying the requirements of N.J.A.C. 7:26E-6.3(e)3, include the following in the natural remediation groundwater remedial action section of the report:

1. A summary table of the groundwater monitoring results collected pursuant to N.J.A.C. 7:26E-6.3(e)1;

2. A discussion of the results of the Mann-Whitney U-Test applied pursuant to N.J.A.C. 7:26E-6.3(e)3;

3. A conclusion that either:

i. The groundwater quality is now in compliance with the applicable remediation standards and, therefore, the groundwater classification exception area is no longer necessary; or

ii. The groundwater contamination is expected to decrease over time and to be in compliance with the applicable remediation standards consistent with the model used to estimate the eventual extent of the plume, and, therefore, that the groundwater classification exception area is still necessary; and

4. If the groundwater classification exception area is still necessary, a plan for the monitoring, maintenance, and certification of the protectiveness of each classification exception area pursuant to N.J.A.C. 7:26E-8.